## South Carolina Department of Health and Environmental Control

2600 Bull Street Columbia, S.C. 29201

Commissioner Robert S. Jackson, M.D.



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NOV 0 8 1984 S. C. DEFT, OF HEALTH AND ENVIRONMENTAL GONTROL Bureau of Solid & Hazardous

Waste Management

## MEMORANDUM

TO: Bob Sentelle, Engineer

Bureau of Solid and Hazardous Waste Management

Suzanna M. Workman, Geologist Smw FROM:

Surveillance and Data Management Section

Ground-Water Protection Division

RE: Poole Site

Preliminary Site Investigation

Cherokee County

DATE: November 8, 1984

On October 30, 1984 the writer accompanied Messrs. John Cresswell, Coleman Miles and Eric Strange to the referenced site to conduct a preliminary site investigation. The writer made a well inventory and sampled three private watersupply wells for metals, pH, TDS, volatile organics, nutrients, alkalinity and TOC. A copy of the well inventory is attached (see figure 1).

Geologically, the site is located in the Piedmont Province of South Carolina. Typically, in this province, three lithologic zones are present. At the study site, the surficial soils, consisting of tight, red silty medium to fine sands comprise the first zone. A partially weathered rock zone consisting of dense soil zones interlayered with rock underlies these silty sand soils and comprises the second zone.

These zones comprise the surficial aquifer. Although relatively impermeable with the respect to particle size, these zones evidence fracture networks (secondary porosity) present in the parent rock. It is through these fractures that ground water migrates. Low yields are characteristic of this aquifer, therefore, large diameter (bored or dug) wells are typically installed.

The crystalline rock zone underlies the silty sand and weathered rock zones, and forms the major aquifer for the study area, the Igneous and Metamorphic Aquifer Systems. The specific rock types underlying the study area have been identified as biotite gneiss and migmatite (Overstreet & Bell).

It is reported that these rocks are highly folded and contorted. The contorted nature of these rocks is expressed in the area topography (see attached map) in the form of numerous fracture traces (or lineaments). It is these fracture zones which provide the greatest permeability and therefore, the greatest quantities



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of water. Also, if ground-water contamination is present, it is likely that the wells installed along these fractures will be the first to evidence poor water quality. The locations of the fracture traces have been identified in figure 2 using a U.S.G.S. 7.5 minute topographic map.

If you have any questions, please contact me.

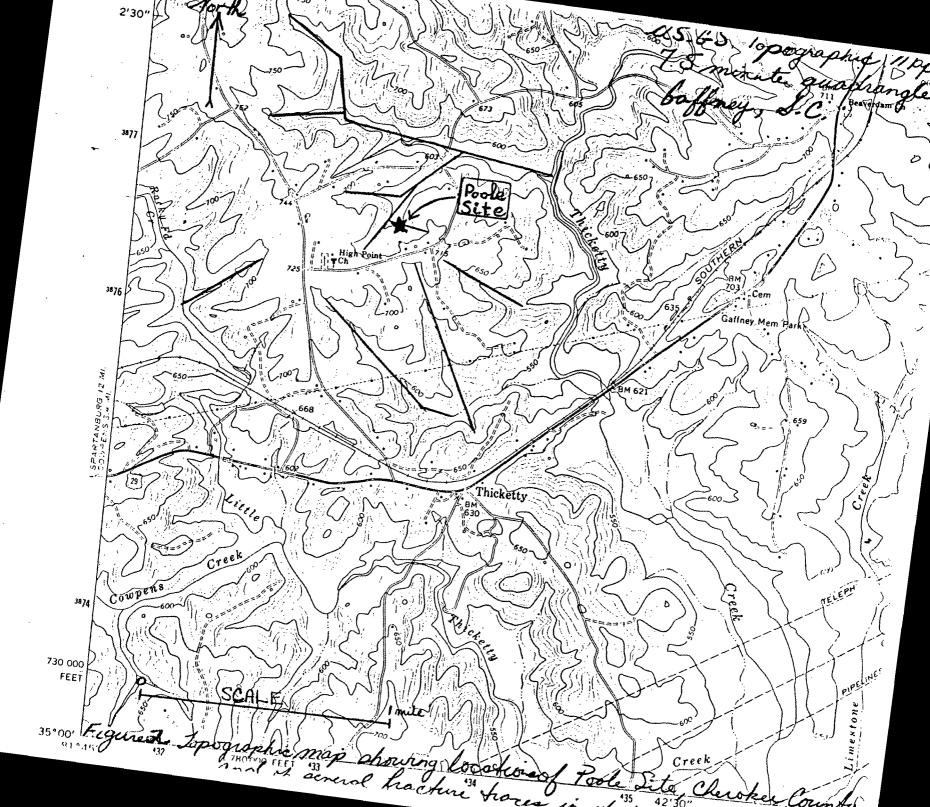
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Attachment

cc: Appalachia III District



FIGURE 1
MCABEE PROPERTY
GAFFNEY, SOUTH CAROLINA



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Analytical Services Data Sheet for Organic Compounds in Solid Waste and Hydrology Samples

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White - Program; Yellow - Program; Pink - Program; Gold - Lab DHEC 40-89 (01/81)

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Date Released from Spec & A. A. Section 8-24-11by

Date Released from Metals Section

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White - Program; Yellow - Program; Pink - Program; Gold - Lab

DHEC 40-89 (01/81)

Date Released from Metals Section 6-2

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Location Medley Drum Sit	ēCoun	ty Cherokee	<u></u>
Sample Type Pumped for Wel			
Date 7/14 Collect	ted By Faller		the small column
1 / 10	Zuroa	Indicates	test requested.
Time Collected (Milit.)	malland 1		
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Chlorinated hydrocarbons, 19/1	- 1 × 3×		
Endrin, mg/1	10.0002	10.0002	<0.000d
Lindane, mg/l	10.004	10.004	10.004
MethoxychTor, mg/l	10.10	(0.10	10.10
Toxaphene, mg/1	10.005	10.005	10.005
		3	
Organophosphates, µg/l	<0.10	10.10	10./0
PCBs, μg/l	10.50	40.50	(0,50
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